

# Natural Communities of Louisiana



## Live Oak Natural Levee Forest

**Rarity Rank:** S1S2/G2

**Synonyms:** Natural Levee Forest, Frontland Forest

**Ecological Systems:**

CES203.512 Lower Mississippi River Bottomland and Floodplain Forest

### General Description:

- This community occurs principally in southeastern Louisiana on natural levees or frontlands and on islands within marshes and swamps
- Similar in some respects to coastal live oak-hackberry forest in that both develop on natural ridges in the coastal zone and overstory dominants are comparable, however natural levee forests have a greater species richness and diversity
- Composed primarily of sandy loams and clays, these ridges range from 4 to 6 feet above sea level
- Soil pH is circumneutral (6.6 – 7.0), and organic matter content is high
- Functions as important wildlife habitat and serves as vital resting habitat for trans-gulf-migratory birds



### Plant Community Associates

#### Common overstory tree species include:

*Quercus virginiana* (live oak),  
*Ulmus americana* (American elm),  
*Acer rubrum* (red maple),  
*Q. laurifolia* (laurel oak),  
*Liquidambar styraciflua* (sweetgum),

*Q. nigra* (water oak),  
*Celtis laevigata* (hackberry),  
*Fraxinus pennsylvanica* (green ash),  
*Gleditsia triacanthos* (honey locust),  
*Acer negundo* (box-elder)

#### Common midstory & understory species include:

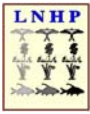
*Crataegus viridis* (green hawthorn),  
*Morus rubra* (red mulberry),  
*Cornus foemina* (swamp dogwood),  
*Persea borbonia* (red bay),

*Diospyros virginiana* (persimmon),  
*Sabal minor* (dwarf palmetto),  
*Morella cerifera* (wax myrtle),  
*Viburnum dentatum* (arrowwood)

#### Common herbaceous layer species include:

*Tradescantia* spp. (spiderworts),  
*Solidago sempervirens* (seaside goldenrod),  
*Sanicula canadensis* (snakeroot),  
*Geum canadensis* (geum),  
*Eupatorium* spp. (thoroughworts),  
*Polygonum virginica* (jumpseed),

*Arisaema dracontium* (green dragon),  
*Samolus verlandieri* (water-pimpernel),  
*Nemophylla aphylla* (baby blue eyes),  
*Hydrocotyle* spp. (penny-worts),  
*Polygonum* spp. (smartweeds),  
*Panicum* spp. (panic grasses),



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## Common herbaceous layer species continued:

*Packera glabella* (= *Senecio glabellus*) (yellow-top),  
*Mikania scandens* (climbing hempvine),  
*Cocculus carolinianum* (Carolina moonseed),  
*Berchemia scandens* (rattan vine),  
*Thelypteris* spp. (marsh ferns)

*Oplismenus hirtellus* (basket grass),  
*Campsis radicans* (trumpet creeper),  
*Toxicodendron radicans* (poison ivy),  
*Smilax rotundifolia* (greenbrier),

## Common epiphytes include:

*Tillandsia usneoides* (Spanish moss),  
*Polypodium polypodioides* (resurrection fern)

*Phoradendron tomentosum* (mistle-toe),

## Federally-listed plant & animal species:

None

## Range:

Gulf Coast Prairies and Marshes ecoregion in the southeast portions of Louisiana.

## Threats & Management Considerations:

Louisiana's live oak natural levee forests occur in the Deltaic Plain of extreme southeastern Louisiana parishes from Orleans and St. Bernard Parishes westward to St. Mary Parish. Of the original 500,000 to 1,000,000 acres in Louisiana, currently only 1-5 % of presettlement extent remains. Since this forest type is found only on natural levee ridges which are higher and drier than the surrounding marshes, they were the first areas to be cleared and developed. The majority of these remnant forests are altered and fragmented, and threats continue from residential development, roads and utility construction, coastal erosion and saltwater intrusion, invasive and exotic species, and overgrazing which damages understory vegetation and inhibits natural stand regeneration.



Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy live oak natural levee forests. Such management strategies should include:

- Preventing conversion of existing natural forests to other land uses
- Surveying for and removal of any invasive plant species (exotics or woody) with use of spot herbicides or mechanical means
- Prohibiting livestock grazing

Prothonotary warbler (*Protonotaria citrea*) is one of the migratory bird species that utilize coastal natural levee live oak forests.

